

may be positioned to electromagnetically screen the printed circuit.

3/15/51 (Amended)

A method according to claim 4, wherein the crimping is carried out by localized crushing of a portion of the substrate over the tab.

3/16/51 (Amended)

A method according to claim 4, wherein the tab comprises a plurality of tabs, wherein more than one tab is crimped.

IN THE ABSTRACT

At page 9, please delete the first full paragraph and insert therefor:

5/1/53
B(7)
A method of manufacturing
--The invention proposes an assembly including a printed-circuit electronics card

mounted on a metal substrate, as well as a metal screening cover electrically connected to the substrate. The substrate exhibits a recessed gutter in which the edge of the cover is accommodated. The edge is crimped onto the substrate in the gutter.--

REMARKS

I. Introduction

Claims 4, 5, and 7 are pending in the instant application. Claims 4, 5, and 7 have been amended. Claim 4 is herein amended so as to be independent. No new subject matter has been added.

Any amendment to the claims, abstract or the specification presented above which is not made specifically in response to a rejection or objection raised by the Examiner has been made to rectify grammatical errors and/or to clarify the scope of that which the Applicants regard as their invention. An Appendix showing marked-up amendments to the claims, abstract, and specification is attached hereto.

II. Claim Rejections Under 35 U.S.C. § 112, First Paragraph

In paragraph 2 of the Office Action, the Examiner rejected claims 4, 5, and 7 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In particular, the Examiner asserted that the recitation, “the edge of the cover is crimped onto the substrate,” is not described in the specification. Further, the Examiner states that the specification provides details on “the substrate being crushed around the cover as elected by species 2b.” Applicants respectfully disagree.

First, the edges of the cover are clearly described in the specification as being “extended by one or more tabs 5, which form an L-shaped return extending outwards from the cover 3.” (page 4, lines 21-23, Figure 1). Second, an example of crimping the edges of the cover onto the substrate is clearly described in the specification, i.e., “[w]hen the cover 3 is correctly positioned, localized crimping is carried out, by lateral displacement of the material of the substrate on top of the corners of the tabs 5 of the cover 3.” (page 4, lines 7-10). Thus, Applicants respectfully submit that the limitation “the edge of the cover crimped onto the substrate” is clearly described in the specification as to convey to one of skill in the art that the Applicants had possession of the claimed invention. Nonetheless, in order to expedite prosecution, Applicants have amended claims 4, 5, and 7 in order to clarify and more distinctly claim this aspect of the invention. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

In paragraph 3 of the Office Action, the Examiner rejected claims 4, 5, and 7 under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which

it is most nearly connected, to make and/or use the invention. Specifically, the Examiner has asserted that “[crimping] the edges of the cover onto the substrate” was not described in the specification to enable one skilled in the art to make and/or use the invention.

In response to this rejection, Applicants again direct the Examiner to an example of “crimping the edges of the cover onto the substrate” as described in the specification, i.e., “[w]hen the cover 3 is correctly positioned, localized crimping is carried out, by lateral displacement of the material of the substrate on top of the corners of the tabs 5 of the cover 3.” (page 4, lines 7-10). The material to be crimped is described as metal. From this disclosure, it is readily apparent that the metal is of any type that may be deformed by crimping. Such materials are readily known to those skilled in the art. Thus, Applicants respectfully submit that the specification clearly enables one skilled in the art to make and/or use the invention. As noted above, Applicants have amended claims 4, 5, and 7 in order to clarify and more distinctly claim this aspect of the invention. Reconsideration and withdrawal of this rejection is respectfully requested.

III. Claim Rejections Under 35 U.S.C. § 112, Second Paragraph

In paragraph 5 of the Office Action, the Examiner rejected claims 4, 5, and 7 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner asserts that in light of the specification “[i]t is unclear as to the part being crimped.” Applicants respectfully disagree.

The Examiner asserts that the specification discloses that “the substrate is crimped over the cover (page 4, ln. 19-23) and the applicants claim suggest that the cover having edges is being crimped.” However, it is clear from the specification as to what “part is being crimped.”

For example, the specification clearly describes that “[w]hen the cover 3 is correctly positioned, localized crimping is carried out, by lateral displacement of the material of the substrate on top of the corners of the tabs 5 of the cover 3.” (page 4, lines 7-10). Since both the cover and the substance are metallic Applicants assert that one of skill in the art would readily recognize that both the cover and the substrate are being crimped together. Thus, Applicants assert that this rejection is improper. Reconsideration and withdrawal of this rejection is respectfully requested.

In paragraph 6 of the Office Action, the Examiner rejected claims 4, 5, and 7 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Examiner asserts that “it is not clear as to wheather [sic] the cover is part of the assembly.”

In response to this rejection, Applicants have amended claim 4 to particularly recite the position of the cover with respect to the assembly. Based on such amendment, reconsideration and withdrawal of this rejection of claims 4, 5, and 7 is respectfully requested.

In paragraphs 7, 8, and 9 of the Office Action, the Examiner rejected claims 4, 5, and 7 under 35 U.S.C. § 112 for containing elements with insufficient antecedent basis. Applicants have made various amendments to claims 4, 5, and 7 to correct these deficiencies. Accordingly, reconsideration and withdrawal of this rejection of the claims is respectfully requested.

In paragraph 10 of the Office Action, the Examiner rejected claims 4, 5, and 7 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In particular, the Examiner states that “[c]laim 4 is improperly dependant from canceled claim 1.” In response to this rejection, Applicants have amended claim 4 to be independent in form. Based on such amendment, reconsideration and withdrawal of this rejection of claims 4, 5, and 7 is respectfully

requested.



CONCLUSION

Based on the foregoing remarks, it is respectfully submitted that the rejections are hereby overcome or otherwise rendered moot, placing this application in condition for allowance.

If any issues remain, or if the Examiner has any suggestions for expediting allowance of this application, he is respectfully requested to contact the undersigned at the telephone number listed below.

Favorable consideration is respectfully requested.


AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for the timely consideration of this amendment under 37 C.F.R. §§ 1.16 and 1.17, or credit any overpayment to Deposit Account No. 13-4500, Order No. 1948-4631.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

Dated: January 24, 2002

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APPENDIXVERSION WITH MARKINGS TO SHOW CHANGES MADE

The specification has been amended as follows:

At page 1, at line 3 please insert:

--FIELD OF THE INVENTION--.

At page 1, at line 10 please insert:

--BACKGROUND OF THE INVENTION--.

At page 1, please delete the fifth full paragraph commencing at line 15 and insert

therefor:

--According to a first type of solution, the electrical connection of the metal cover to [the earth] ground which the metal substrate constitutes is formed independently of the mechanical fixing of the [said] cover with respect to the [said] substrate and to the electronics card. For example, the electrical connection to [earth] ground may then be formed by means such as riveting, or screwing[,] a soldered joint or even a soldered wire link.--

At page 2, at line 7 please insert:

--SUMMARY OF THE INVENTION--.

At page 2, please delete the fourth full paragraph commencing at line 10 and insert

therefor:

--To this end, the invention proposes an assembly including a printed-circuit electronics card mounted on a metal substrate, as well as a metal screening cover electrically connected to the substrate, the substrate exhibiting a recessed gutter in which the edge of the cover is accommodated, the [said] edge being crimped onto the [said] substrate in the gutter.--

At page 2, please delete the fifth full paragraph commencing at line 17 and insert

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therefor:

--The invention also proposes a method for producing such an assembly, characterized
[characterised] by the following stages:

- the substrate is stamped so as to form a gutter in it,
- the electronics card is assembled onto the [said] substrate,
- the cover is positioned on the assembly thus obtained, arranging the edge of the [said]
cover in the [said] gutter,

- the [said] edge is crimped onto the [said] substrate.--

At page 2, at line 32 please insert:

--BRIEF DESCRIPTION OF THE DRAWINGS--.

At page 3, at line 10 please insert:

--DETAILED DESCRIPTION OF THE INVENTION--.

At page 3, please delete the fourth full paragraph commencing at line 13 and insert
therefor:

--The substrate 1 has a recessed gutter 4 produced by stamping the material. This gutter
4 extends over the [said] substrate along a contour which corresponds to that of the edge of the
metal cover 3.--

At page 3, please delete the seventh full paragraph commencing at line 21 and insert
therefor:

--To this end, the [said] edge is extended by one or more tabs 5, which form an L-shaped
return extending outwards from the cover 3.--

At page 3, please delete the eighth full paragraph commencing at line 24 and insert
therefor:

--Such a tab 5 is accommodated in a region of the gutter 4 which is stamped with a width which coincides with that of the [said] tab 5. Hence, the [said] tab 5 is inserted exactly into the recessed shape of the gutter 4.--

At page 4, please delete the third full paragraph commencing at line 7 and insert therefor:

--When the cover 3 is correctly positioned, localized [localised] crimping is carried out, by lateral displacement of the material of the substrate on top of the corners of the tabs 5 of the cover 3. The material displaced during the crimping is that which forms the edges of the gutter originating from the stamping. More particularly, as Figures 2a and 2b illustrate, the material pushed back by the stamping during the formation of the gutter exerts on the tabs 5, after crimping, parallel forces canceling each other out. The material displaced during the crimping is referenced by 6.--

At page 4, please delete the fifth full paragraph commencing at line 24 and insert therefor:

--As Figures 3 and 4 illustrate, the mold [mould] in which the substrate 1 is stamped may be shaped in such a way that the [said] stamped substrate 1 exhibits, at the edge of the gutter 4, a protuberance 7 which constitutes the excess material to be displaced during the crimping; the height of this protuberance is adjusted so as to remain below the upper level of the electronics card 2, so as not to prevent the screen-printing of the soldering paste for mounting the components prior to the cover 3 being put in place.--

At page 4, please delete the sixth full paragraph commencing at line 34 and insert therefor:

--Moreover, the depth of the gutter 4 is adjusted so that the bottom of the [said] gutter 4 and the return 5 are below the electronics card 2. This makes it possible to prevent any risk of

leakage of electromagnetic waves.--

The claims have been amended as follows:

4. (Amended) A [M]ethod of [for] producing an assembly [according to one of the preceding claims, characterised by the following different stages] comprising a printed-circuit electronics card mounted on a metal substrate with a metal screening cover electrically connected to the substrate, the method comprising:

- [- the substrate (1) is stamped so as to form a gutter (4) in it,
- the electronics card (2) is assembled onto the said substrate,
- the cover (3) is positioned on the assembly thus obtained, arranging the edge of the said cover (3) in the said gutter (4),
- the said edge is crimped onto the said substrate (1)]

forming a gutter on a metallic substrate by stamping;

mounting a printed circuit onto a surface of the metallic substrate adjacent to the gutter;

positioning a screening cover having an edge including a tab so that the tab rests substantially within the gutter;

crimping the edge of the screening cover onto the substrate, whereby the cover may be positioned to electromagnetically screen the printed circuit.

5. (Amended) [Method according to the preceding claim, characterised in that the crimping is carried out by localised crushing of material of the substrate (1) onto one or more tabs which terminate the edge of the cover (3), in such a way as to exert opposed forces which cancel out on the tab or tabs (5)]

A method according to claim 4, wherein the crimping is carried out by localized

crushing of a portion of the substrate over the tab.

7. (Amended) [Method according to one of Claims 4 to 6, characterised in that only some of the tabs of the cover (3) are crimped]

A method according to claim 4, wherein the tab comprises a plurality of tabs, wherein more than one tab is crimped.

The abstract has been amended as follows:

At page 9, please delete the first full paragraph and insert therefor:

--The invention proposes an assembly including a printed-circuit electronics card [(2)] mounted on a metal substrate [(1)], as well as a metal screening cover [(3)] electrically connected to the substrate [(1)]. The substrate [(1)] exhibits a recessed gutter [(4)] in which the edge of the cover [(3)] is accommodated. The [said] edge is crimped onto the [said] substrate [(1)] in the gutter [(4)].--